

LAND APPLICATION SITE

ROBERT G. VANLANDINGHAM

RMRGV 1-3

RICHMOND COUNTY

7.

### VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND API	LICATION AGREEN	ENT - BIOSOLIDS AND	INDUSTRIAL RESIDUALS
remains in effect until it is t the Landowner in the even individual parcels identified	erminated in writing by e t of a sale of one or mor I in this agreement chan	2-/3-/2 between (/ , referred to here as the better party or, with respect the parcels, until ownership of	Robert G.  Anding ham referred to  Permittee". This agreement of  those parcels that are retained by  all parcels changes. If ownership of  ownership has changed will no  ement.
Landowner: The Landowner is the own the agricultural, silvicultura attached as Exhibit A.	er of record of the real p	property located in Richm entified below in Table 1 and	ond & Virginia, which includes identified on the tax map(s)
Table 1.: Parcels au	horized to receive blosc	olids, water treatment residua	als or other industrial sludges
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
Portion OF- TAX MAP 2	8 Parcel 12	The transfer of	Shake a first out of the land
farcel A 102,98 Ac,			
Parcel B 101,92 Ac.			
MISSISSIES III - LATE OFFER	Special Services	March Street, sex	reny e-ever #21 <sup>e</sup>
Tax Map 34 Parcel 7	with a subject to the		ENGLESS TO THE PROPERTY OF THE
☐ Additionál parcels containing Lan	d Application Sites are identifi	ied on Supplement A (check if appli	cable)
later than the date 2. Notify the Permitter	of the property transfer; e of the sale within two v	and weeks following property tran	AND THE SECOND OF STREET
notify the Permittee immed	iately if conditions chang		ified herein. The Landowner will longer available to the Permittee herein contained becomes
agricultural sites identified a inspections on the land idea purpose of determining con	above and in Exhibit A. ntified above, before, du npliance with regulatory er treatment residuals	The Landowner also grants i	als as specified below, on the permission for DEQ staff to conduct of permitted residuals for the uch application.  Other industrial sludges  ▼ Yes □ No
Robert G. Vansland; Landowner - Printed Name, Title	wylny Plas	AJUJ Defor	PR Bot of Pallage Ch. 2 Mailing Address & Phone Number
Democratic	e el segue à une l'exerc	Managara a series	804-529-7225
manner authorized by the VPA	Permit Regulation and in	amounts not to exceed the rate:	uals on the Landowner's land in the s identified in the nutrient management .1-104.2 of the Code of Virginia.
The Permittee agrees to notify specifically prior to any particu	the Landowner or the Lan lar application to the Lando	downer's designee of the propo owner's land. Notice shall include	sed schedule for land application and le the source of residuals to be applied.
		rity to the person signing for fand Do not check this box if the landowr	downer above. I will make a copy of this ner signs this agreement)

Permittee – Authorized Rep esentative Printed Name

Signature

PO Box 562 Remington, Virginia 22734

Mailing Address

#### Landowner Coordination Form

This form is used by the Permittee to identify properties (tax parcels) that are authorized to receive biosolids and/or industrial residuals, and each of the legal landowners of those tax parcels. A Land Application Agreement-Biosolids and Industrial Residuals from original signature must be attached for each legal landowner identified below prior to land application at the identified parcels.

Permittee:

Recyc Systems, Inc

Site Name: Robert G. Vanlandingham

County or City: Richmond County

Please Print

Signature not required on this page

Tax Parcel ID(s)	<u>Landowners (s)</u>	
TM 28 P 12 (portion of) Parcel A,B	Robert G. Vanlandingham	
TM 34 P 7	Robert G. Vanlandingham	

[Type text]

### **FARM DATA SHEET**

SITE NAME:	Robert G. Vanlandingham	COUNTY:	Richmond
OWNER:	Robert G. Vanlandingham	OPERATOR:	Robert G. Vanlandingham
OWNER'S	P.O. Box 241	OPERATOR'S	P.O. Box 241
ADDRESS:	Callao, VA 22435	ADDRESS:	Callao, VA 22435
OWNER'S TELEPHONE:	804-529-7225	OPERATOR'S TELEPHONE:	
GENERAL FARM TYPE:	Row Crops	CELL PHONE:	
# CATTLE:	None	EMAIL:	
LAGOON or SLURRY:	N/A	LATITUDE:	37 <sup>0</sup> 55′00′′
TOPO QUAD:	Lottsburg	LONGITUDE:	76 <sup>0</sup> 34′30′′
COMMENTS:			
John Hancock Life Ins 102.98 Ac DB 293 Pg	. Co. (USA) to Robert G. Vanlan 292 May 30,2012	dingham Parcel A cor	ntains
John Hancock Life Ins 101.92 Ac DB294 Pg 1	urance Co. (USA) to Robert G. \ .73 July 24,1912	/anlandingham Parce	l B containing
Field 3 is being cleare	d as of 12-13-12		

### RECYC SYSTEMS, INC FIELD DATA SHEET

Field	Gross	Env	ironmentally	Sensitive So	oils		Tax	FSA	A
Identification	Acres	Water Table	Bed Rock/Shallow	Surf/Leach	Freq Flood	Hydro Map	Map#	Tract	t #
RMRGV 1	51.7	1,16D,17A21	-		-	RA 64	TM 34 P 7	T 9847	F 1
RMRGV 2	45.0	1	" =="	-22		RA 64	Portion of TM 28 P 12	Т 9847	F0
RMRGV 3	75.0	16D,17A				RA 64	Portion of TM 28 P 12	T 9847	F 0
							<u> </u>		
							· · · · · · · · · · · · · · · · · · ·		
								-	
TOTAL ACRES IN SITE	171.7								

Page 1 of 4

Report Number: 12-355-0616 **Account Number: 70594** 



### A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC

SUSAN TRUMBO 8455 WHITESHOP RD **CULPEPER VA 22701** 

Grower:

Submitted By: SD

Farm ID:

ROBERT VANLANDINGHAM

RICHMOND CO

**SOIL ANALYSIS REPORT** 

Analytical Method(s):

Mehlich 3

Date Received: 12/19/2012

Date Of Analysis: 12/20/2012

Date Of Report: 01/02/2013

		Or	ganic Ma	atter		Phos	phorus		Pota	ssium	Mag	nesium	Ca	lcium	Sodium	F	Н	Acidity	C.E.C
Sample ID Field ID	Number Number	%	Rate	ENR Ibs/A	Mehi ppm	ich 3 Rate		Rate	ppm	K Rate		Mg Rate		Ca Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
RMRGV 1A	03166	1.8	L	81	63	Н			105	Н	93	Н	348	М		6.1	6.89	0.4	3.2
RMRGV 1B	03167	1.9	L	83	53	Н			117	Н	100	Н	369	M		6.2	6.89	0.4	3.4
RMRGV 2A	03168	3.8	М	123	4	VL			52	L	33	М	210	L		5.1	6.84	0.9	2.3
RMRGV 2B	03169	3.9	М	124	8	VL	1		58	L	36	M	222	L		4.9	6.81	1.2	2.8
RMRGV 3A	03170	2.5	L	97	5	VL			60	L	39	М	156	L		4.9	6.83	1.0	2.2

		Perce	nt Base	Saturati	on	Nitr	ate	Sı	lfur	Zi	nc	Mang	anese	lr	on	Cop	per	Bo	ron	Soluble Salts	Chlo	ride	Aluminum
Sample ID Field ID	K %	Mg %	Ca %	Na %	H %	ppm	N Rate	ppm	S Rate	ppm 2	n Rate	ppm	In Rate	ppm	Fe Rate	C ppm	น Rate		Rate	SS ms/cm Rate	Ppm CI	Rate	Al ppm
RMRGV 1A	8.4	24.2	54.4		13.8																		
RMRGV 1B	8.8	24.5	54.3		12.1					-													
RMRGV 2A	5.8	12.0	45.7		38.2																		
RMRGV 2B	5.3	10.7	39.6		43.6		-								•								
RMRGV 3A	7.0	14.8	35.5		44.8					<u> </u>													

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High), ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g-(milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: A&L Eastern Laboratories, Inc.

Page 2 of 4

Report Number: 12-355-0616 Account Number: 70594



A&L Eastern Laboratories
7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC

SUSAN TRUMBO 8455 WHITESHOP RD CULPEPER VA 22701 Grower:

Submitted By: SD

ROBERT VANLANDINGHAM

RICHMOND CO

Farm ID:

**Date Received: 12/19/2012** 

Date Of Report: 01/02/2013

### SOIL FERTILITY RECOMMENDATIONS

Sample ID Field ID	Intended Crop	Yield Goal	Lime Tons/A	Nitrogen N Ib/A	Phosphate P <sub>2</sub> O <sub>5</sub> Ib/A	Potash K <sub>2</sub> O Ib/A	Magnesium Mg Ib/A	Sulfur S Ib/A	Zinc Zn Ib/A	Manganese Mn Ib/A	Iron Fe Ib/A	Copper Cu Ib/A	Boron B Ib/A
RMRGV 1A	Adjust pH to 6.5	0	1.0				0						
RMRGV 1B	Adjust pH to 6.5	0	1.0				0						
RMRGV 2A	Adjust pH to 6.5	0	1.5				47						
RMRGV 2B	Adjust pH to 6.5	0	1.5				44						
RMRGV 3A	Adjust pH to 6.5	0	1.5				41						

#### Comments:

### Sample(s): RMRGV 2A,RMRGV 2B,RMRGV 3A Crop: Adjust pH to 6.5

Apply dolomitic lime to raise pH and improve the magnesium level.

If dolomitic lime is not used, apply required magnesium with magnesium oxide. Epsom Salts, K-Mag or Sul-PO-Mag.

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

Our reports and letters are for the exclusive and confidential use of our clients,, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public anouncements without obtaining our prior written authorization. Copy right 1977.

Pauric Mc George

Pauric McGroary

Page 3 of 4

**Report Number: 12-355-0616** Account Number: 70594



### A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC.

SUSAN TRUMBO 8455 WHITESHOP RD CULPEPER VA 22701

Grower:

Submitted By: SD

ROBERT VANLANDINGHAM

RICHMOND CO

Farm ID:

SOIL ANALYSIS REPORT

Analytical Method(s):

Mehlich 3

Date Received: 12/19/2012

Date Of Analysis: 12/20/2012

Date Of Report: 01/02/2013

		Or	ganic Ma	atter		Phos	phorus		Pota	assium	Mag	nesium	Cal	cium	Sod	ium	t t	Н	Acidity	C.E.C
Sample ID Field ID	Lab Number	%	Rate	ENR Ibs/A	Mehl ppm	ich 3 Rate	Res	serve Rate	ppm	K Rate	ppm	Mg Rate	ppm	Ca Rate	ppm N	a Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
RMRGV 3B	03171	2.3	L	93	4	VL			52	L	37	М	164	L			4.9	6.83	1.0	2.2

		Perce	nt Base	Saturati	on	Nitr	rate	Su	lfur	Zi	nc	Mang	anese	Ir	on	Cop	per	Во	ron	Soluble	Salts	Chl	oride	Aluminum
Sample ID Field ID	K	Mg	Ca	Na	Н	NO	, N		S	Z	n	IV	ln	F	=e	С	u	1	3	SS	3	(	CI	Al
. 10.4 15	%	%	%	%	%	ppm	Rate	ppm	Rate	ppm	Rate	ppm	Rate	ppm	Rate	ppm	Rate	ppm	Rate	ms/cm	Rate	ppm	Rate	ppm
RMRGV 3B	6.1	14.0	37.3		44.9																			

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: A&L Eastern Laboratories, Inc.

Pauric McGroary

Page 4 of 4

Report Number: 12-355-0616 Account Number: 70594



A&L Eastern Laboratories

ROBERT VANLANDINGHAM

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC

SUSAN TRUMBO 8455 WHITESHOP RD CULPEPER VA 22701 Grower:

Submitted By: SD

Farm ID:

RICHMOND CO

Date Received: 12/19/2012

Date Of Report: 01/02/2013

#### SOIL FERTILITY RECOMMENDATIONS

Sample ID Field ID	Intended Crop	Yield Goal	Lime Tons/A	Nitrogen N Ib/A	Phosphate P <sub>2</sub> O <sub>5</sub> Ib/A	Potash K <sub>2</sub> O Ib/A	Magnesium Mg Ib/A	Sulfur S Ib/A	Zinc Zn Ib/A	Manganese - Mn Ib/A	lron Fe lb/A	Copper Cu Ib/A	Boron B Ib/A
RMRGV 3B	Adjust pH to 6.5	0	1.5				43						

#### Comments:

Sample(s): RMRGV 3B Crop: Adjust pH to 6.5

Apply dolomitic lime to raise pH and improve the magnesium level.

If dolomitic lime is not used, apply required magnesium with magnesium oxide. Epsom Salts, K-Mag or Sul-PO-Mag.

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

Our reports and letters are for the exclusive and confidential use of our clients,, and may not be reproduced in whole or part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public anouncements without obtaining our prior written authorization. Copy right 1977.

Pauric Mc George

Pauric McGroary

### THE PLANNER IS NOT STATE CERTIFIED

### Nutrient Management Plan Balance Sheet (Spring, 2013-Summer, 2014) Robert G. Vanlandingham Planner: Recyc Systems, Inc

Tract: 9847

Location: Richmond

(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

Field CFSA No. /Name	Size (ac) Total/ Used	Yr.	Crop	Needs N-P-K (Ibs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (Ibs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes
1/RMRGV 1(N)	52/52	2013	Soybeans (FS)	0-60-60	0/0				0-60-60	N/A		
0/RMRGV 2(N)	45/45	2013	Fallow	0-0-0	0/0				0-0-0	N/A		
0/RMRGV 3(N)	75/75	2013	Fallow	0-0-0	0/0				0-0-0	N/A		

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

### Soil Test Summary

Tract	Field	Acre	Date	P2O5	K2O	Lab	Soil pH	Lime Date	rec. lime tons/Ac
9847	RMRGV 1	52	2013-Wi	H- (63 P ppm)	M (105 K ppm)	A&L MIII	6.1		
9847	RMRGV 2	45		L- (4 P ppm)	L+ (52 K ppm)	A&L MIII	5.1		
9847	RMRGV 3	75		L- (5 P ppm)	M- (60 K ppm)	A&L MIII	4.9		

### Field Productivities for Major Crops

Tract Name	Tract/ Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
9847	9847/1	RMRGV 1	52	Suffolk	lVa	П	Not Suited	Ш	
	9847/0	RMRGV 2*	45	Suffolk	IVa	11	Not Suited	Ш	High Leaching, High Slope
	9847/0	RMRGV 3	75	Suffolk	IVa	II	Not Suited	111	

<sup>\*</sup> Do not apply manure or biosolids more than 30 days prior to planting. Apply commercial fertilizer nitrogen to row crops in split spring applicaions.

### Yield Range

Field Productivity Group	Corn Grain Bu/Acre	Barley/Intensive Wheat Bu/Acre	Std. Wheat Bu/Acre	Alfalfa Tons/Acre	Grass/Hay Tons/Acre
]	>170	>80	>64	>6	>4.0
11	150-170	70-80	56-64	4-6	3.5-4.0
111	130-150	60-70	48-56	<4	3.0-3.5
IV	100-130	50-60	40-48	NA	<3.0
V	<100	<50	<40	NA	NA

### **Farm Summary Report**

Plan:

**New Plan** 

Spring, 2013 - Summer, 2014

Farm Name:

Robert G. Vanlandingham

Location:

Richmond

Specialist:

Recyc Systems, Inc

N-based Acres: 171.7 P-based Acres: 0.0

**Tract Name:** FSA Number:

9847 9847

Location:

Richmond

Field Name:

RMRGV 1

Total Acres:

51.70 Usable Acres: 51.70

FSA Number: 1

В

Tract:

9847

Location:

Richmond

Slope Class:

Hydrologic Group:

В

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE Wi-2013 PH

6.1

Р

H-(63 P ppm)

K M(105 K ppm)

Lab A&L MIII

Soils:

**PERCENT** 

SYMBOL SOIL SERIES

3 6

1 Atlee 5B

Emporia 16D

5

Rumford Tetotum

16	17A	Savannah
20	19A	Suffolk
47	19B	Suffolk
3	21	Tomotlev

### Field Warnings:

Crop Rotation:

PLANTED YIELD CROP NAME

2013-Sp 36.4 \* bushel(s) Soybeans (FS) - No Till

Field Name: RMRGV 2

Total Acres: 45.00 Usable Acres: 45.00

FSA Number: 0

Tract: 9847

Location: Richmond

Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE PH P K Lab

Wi-2013 5.1 L-(4 P ppm) L+(52 K ppm) A&L MIII

Soils:

PERCENT SYMBOL SOIL SERIES

28 5B Emporia
 35 15E Rumford
 38 19B Suffolk

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Soils with perent slope in excess of 15%

Crop Rotation:

**PLANTED** YIELD **CROP NAME** 

2013-Sp

0.0

Fallow - No Till

Field Name:

RMRGV 3

Total Acres:

75.00 Usable Acres: 75.00

FSA Number: 0 Tract:

9847

Location:

Richmond

Slope Class: C Hydrologic Group:

В

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE

PH P

K

Lab

Wi-2013

4.9

L-(5 P ppm)

M-(60 K ppm)

**A&L MIII** 

Soils:

**PERCENT** 

SYMBOL

**SOIL SERIES** 

3 15 5B 15E Emporia Rumford

5

Savannah

24

17A 19A

Suffolk

53

19B

Suffolk

Field Warnings:

**Crop Rotation:** 

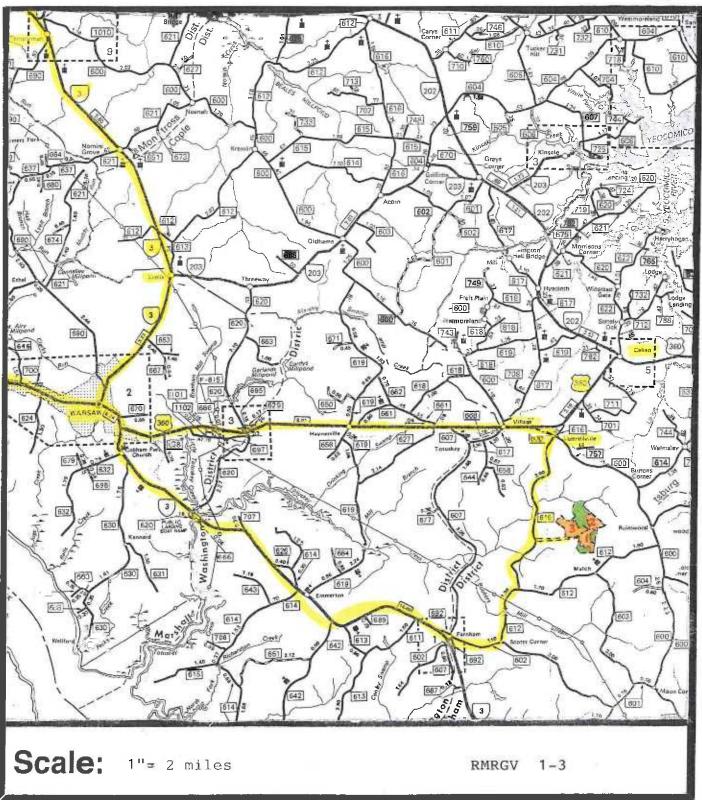
PLANTED YIELD 2013-Sp 0.0

CROP NAME Fallow - No Till

### MAPS

(Biosolids Land Application)



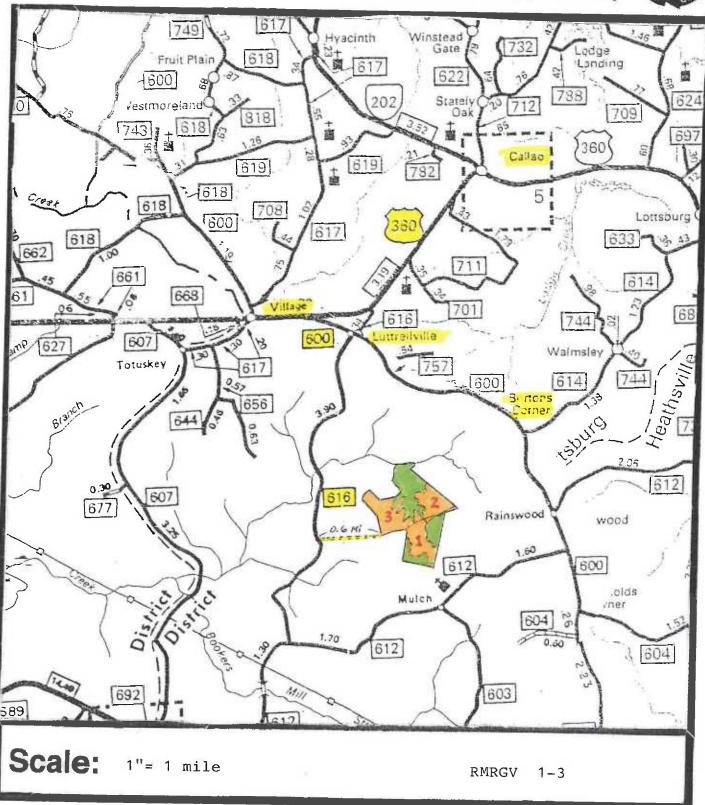


**VICINITY MAP** 

N

(Biosolids Land Application)



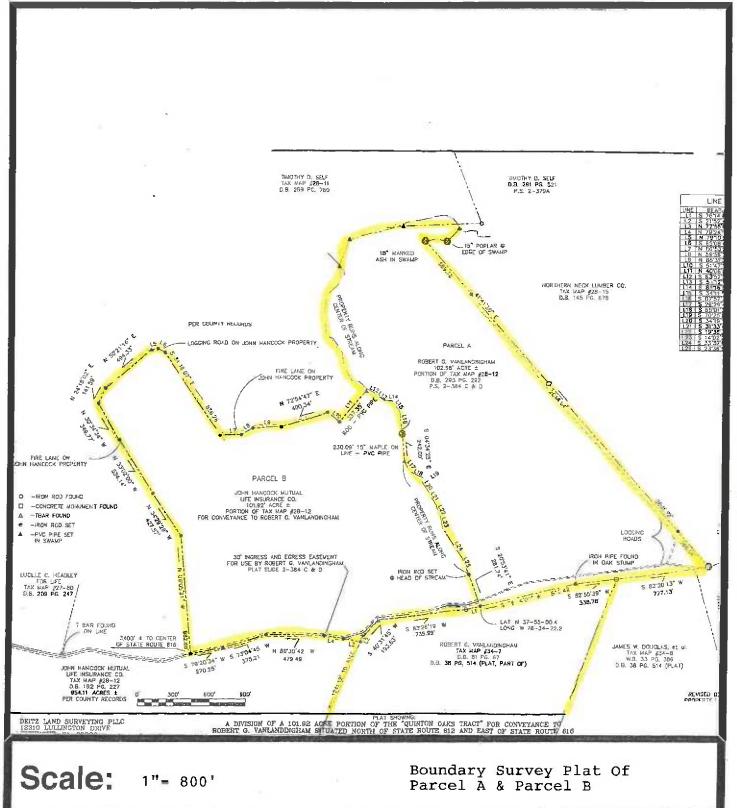


VICINITY MAP

NA

(Biosolids Land Application)

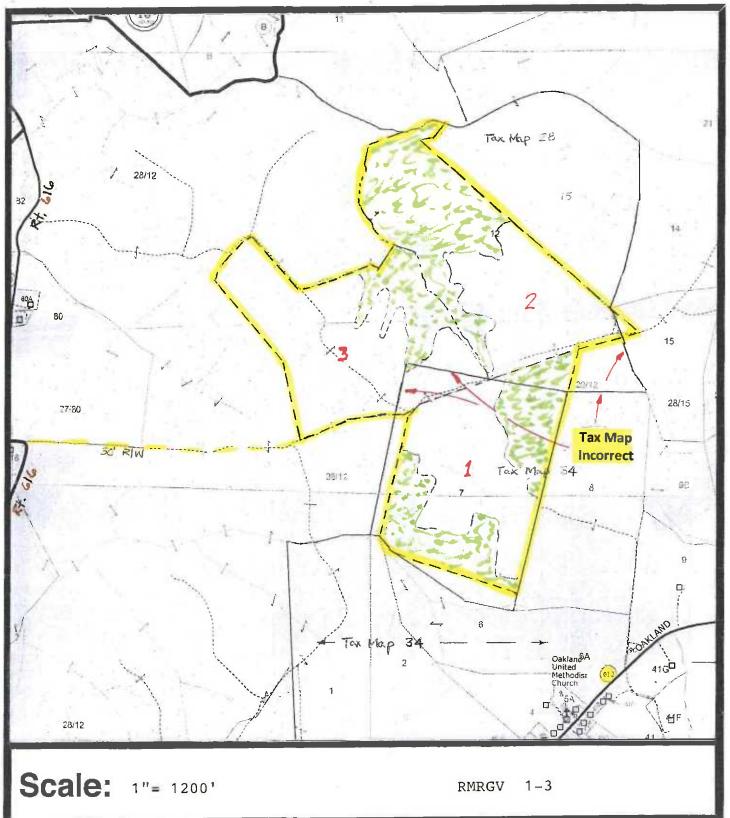






Punting Garden

**NC.** (Biosolids Land Application)

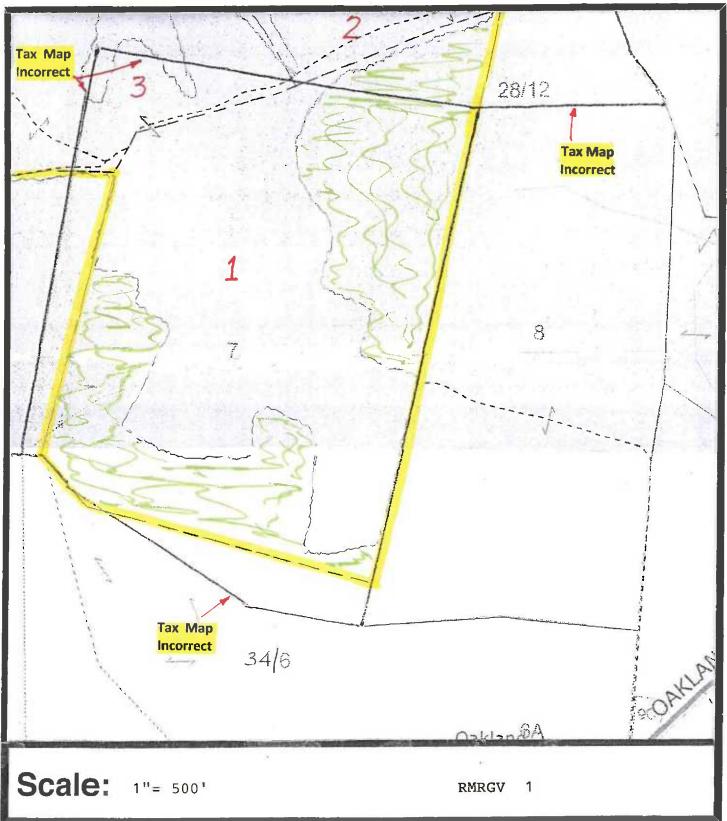


TAX MAP

N A

(Biosolids Land Application)



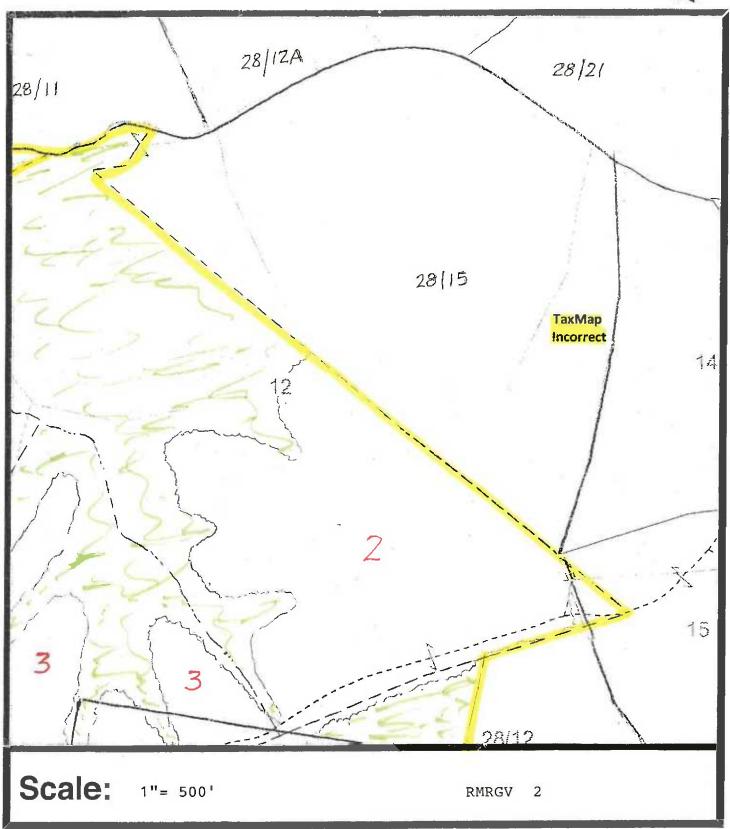


TAX MAP

N

(Biosolids Land Application)



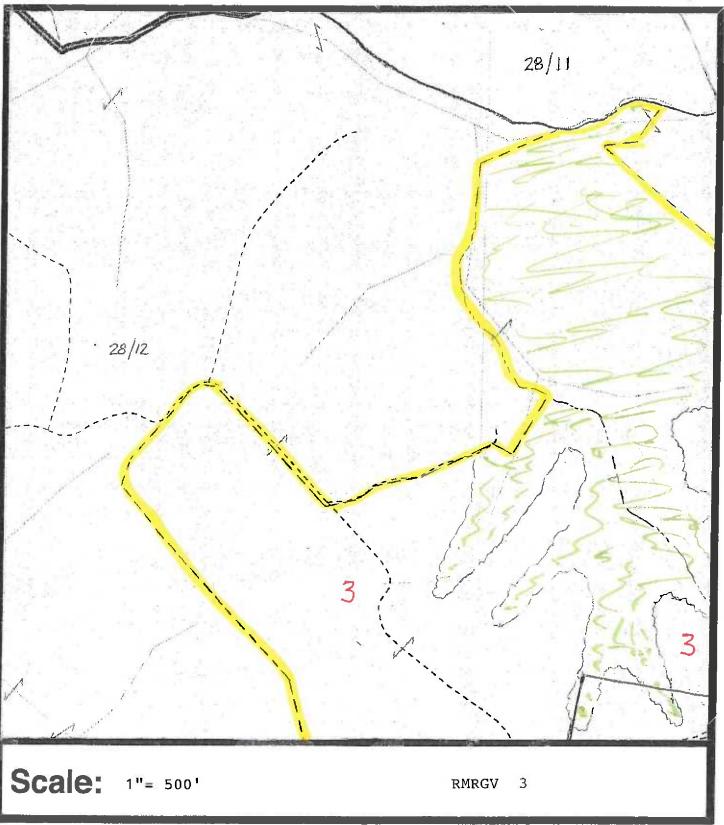


TAX MAP

N

(Biosolids Land Application)



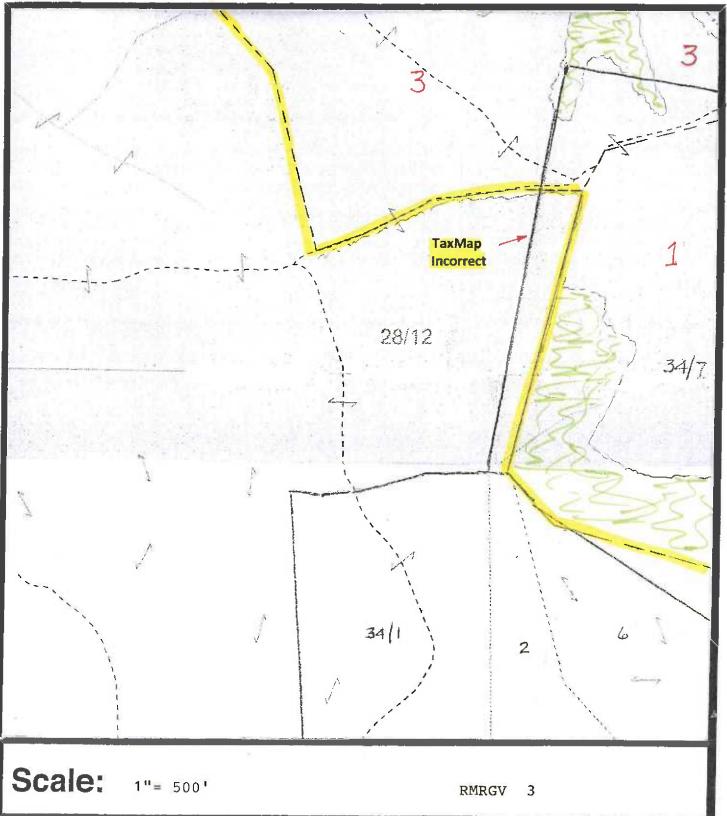


TAX MAP

NA

(Biosolids Land Application)





TAX MAP

NA

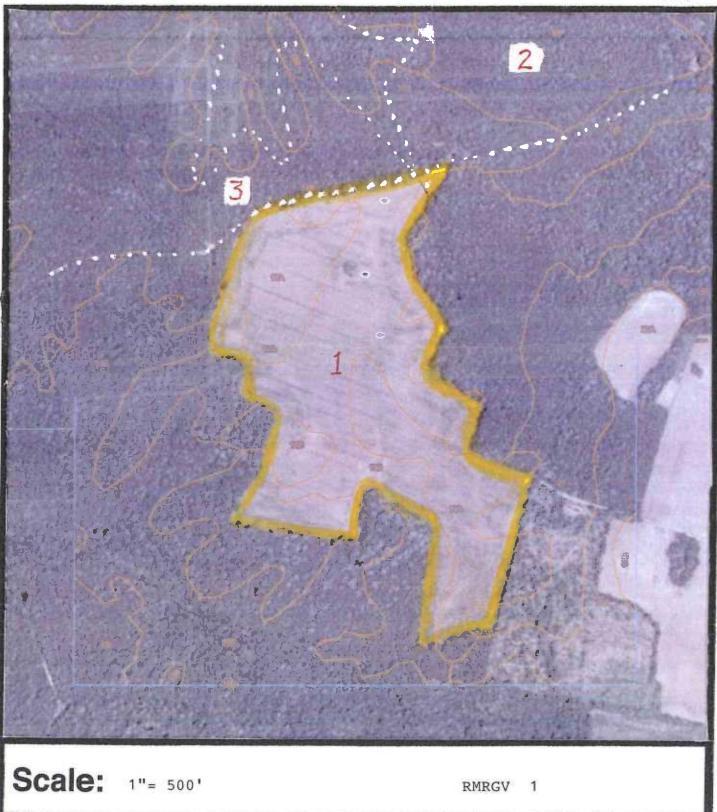
### **ADJOINING LANDOWNERS Robert G. Vanlandingham**

### RICHMOND COUNTY

Тах Мар	Parcel #	Owner Name(s)	]
28	11 12 14,15	Timothy D. Self  John Hancock Mutual Life Insurance Co.  Northern Neck Lumber Co.	LLC- Group
34	1 2 6 7 8	Timothy D. Self  John Hancock Mutual Life Insurance Co.  Northern Neck Lumber Co.  Potomac Supply Corp. Northern Regions Time  Evan B and Austin R. Barnes  Chester C. Bryant, Jr. and William F. Thorne  Robert Graham Vanlandingham  James W. Douglas et als	

# Recyc Systems. Inc. (Biosolids Land Application)

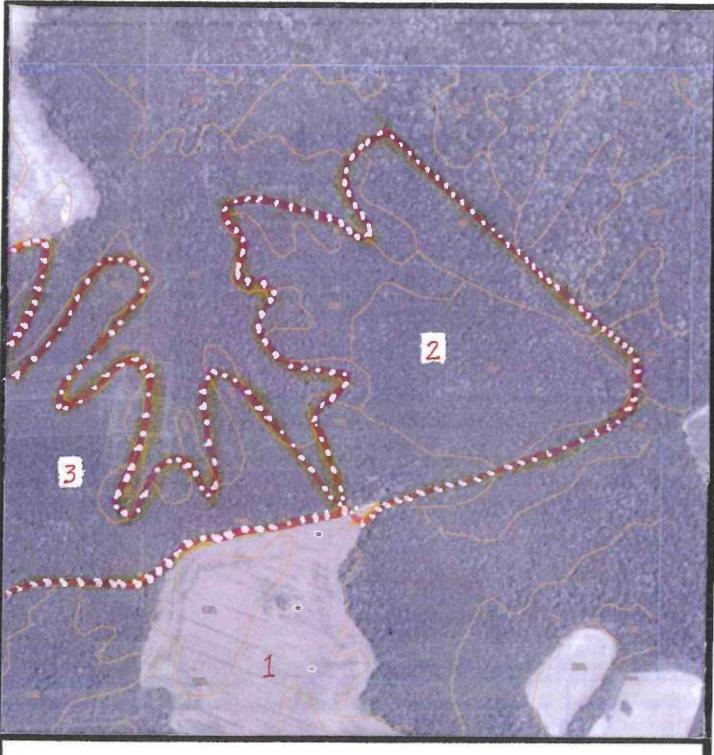




SOIL MAP

(Biosolids Land Application)





Scale: 1"= 500'

RMRGV 2,3

SOIL MAP



(Biosolids Land Application)





Scale: 1"= 500'

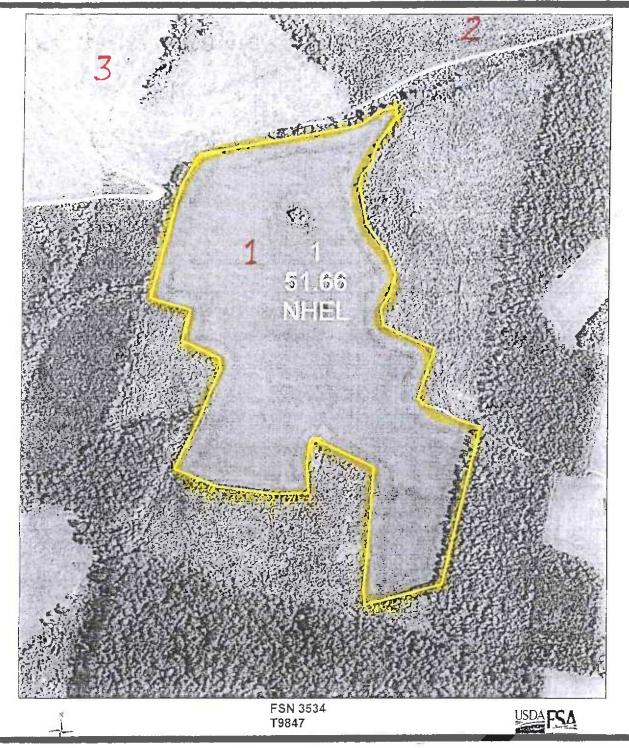
RMRGV

SOIL MAP



(Biosolids Land Application)





Scale:

1"= 500'

RMRGV

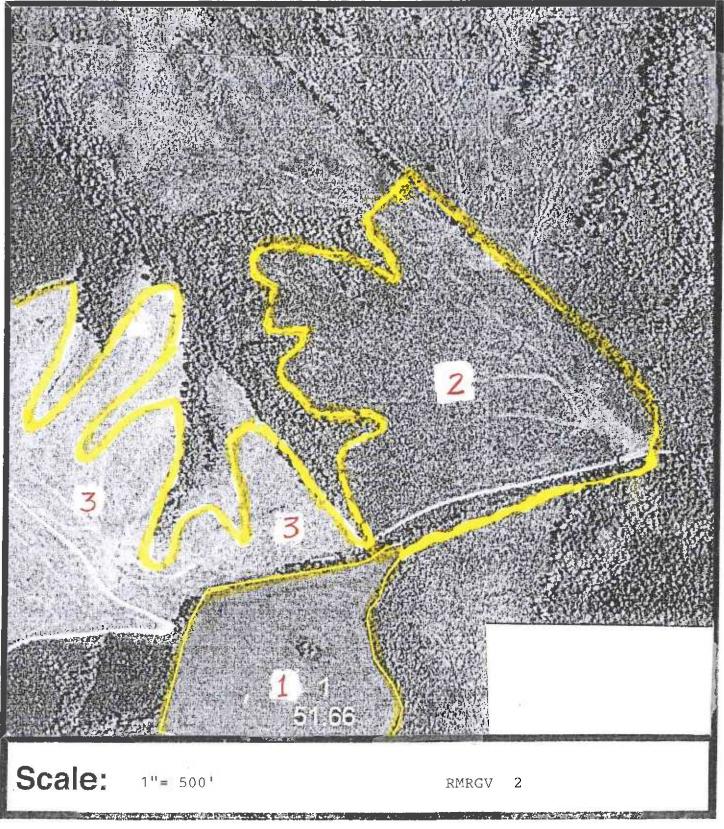
**AERIAL MAP** 



## Recyc Systems Inc.

(Biosolids Land Application)



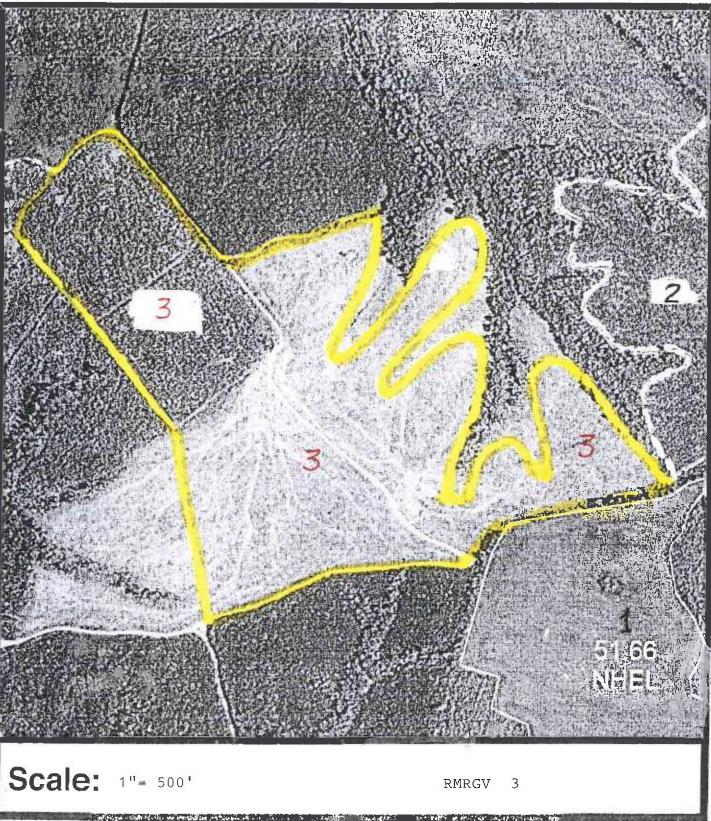


**AERIAL MAP** 

N

# Recyc Systems. (Biosolids Land Application)





**AERIAL MAP** 

### Legend for Site Plan

HW

House and Well





Well / Spring



Perennial Streams & Surface





Intermittent Stream / Drainage







Private Drive

Rock / Rocky Area









State Road



Field Boundary / Fence



**Property Line** 

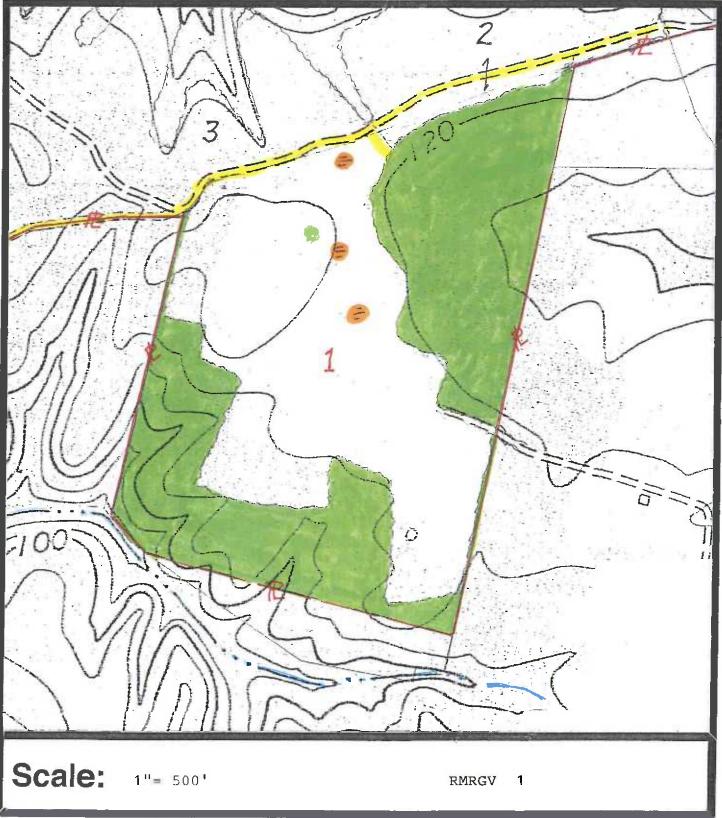


Slope

Frequent Flooded Soil

(Biosolids Land Application)



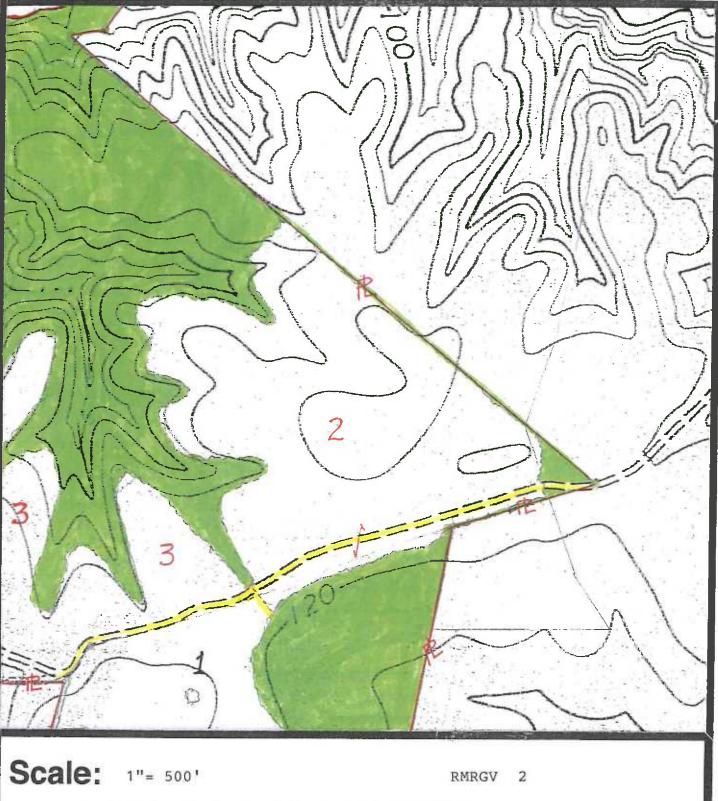


SITE PLAN

N

1C. (Biosolids Land Application)



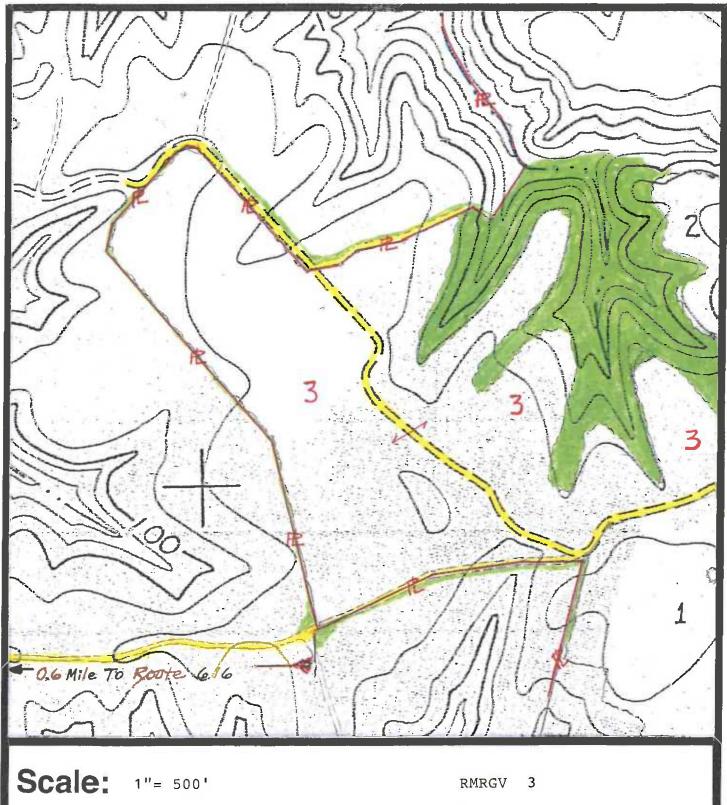


SITE PLAN

NA

(Biosolids Land Application)

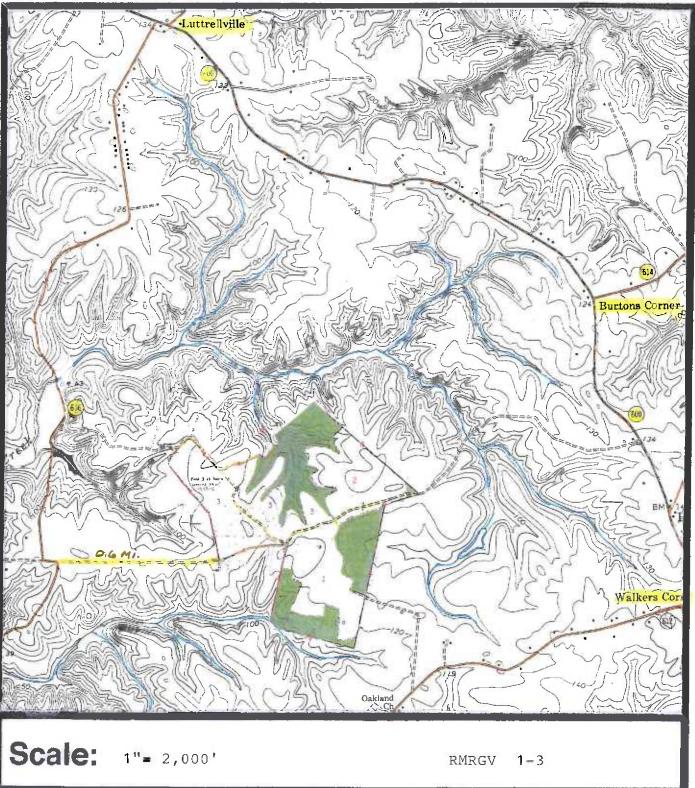




SITE PLAN

IC. (Biosolids Land Application)





**TOPOGRAPHIC MAP** 

N A